

Organisations & Data Management

Database Design Tools, p36

- Explain why design is an important step in creating a solution.
It allows us to work out what the scope of our solution is, and it also makes us plan our method in how we are going to create our solution. In this stage we need to consider the materials, method and appearance of it and also decide what it can and can't do.

Naming Conventions

- What is the importance of planning out naming conventions before you begin developing the solution?
So it can be easily identified by a developer or a user.
- List examples of naming conventions for a database.

Tables:	Tbl
Queries:	Qry
Forms:	Frm
Reports:	Rpt
- What is to be avoided and how is readability assisted?
Spaces and underscores are to be avoided. A mix of uppercase and lowercase characters should also be used to aid readability.
- Describe the purpose of the following design tools:
 - **data dictionary**
The data dictionary formalises fields/validates data and also gives the developer a precise explanation of how each field should be set up in each table.
 - **data structure diagram**
A data structure diagram is used to indicate the relationships that exist between the specific tables of a planned database so that the developer will know how the tables are to be linked.
 - **entity-relationship diagram**
An entity-relationship diagram is used by database designers to establish the interrelationships between different data elements.
 - IPO chart**
Charts/Diagrams used to identify inputs, outputs and the processing steps required to transform raw data in useful and meaningful information.
 - **query design and layout diagram**
 - Query Design:** Should specify the fields to be included and the tables to which they belong.
 - Layout diagram:** Shows the elements to be included on an input form, indicating placement of fields and labels, etc.
- What is the purpose of test data? What should be considered when developing test data?
Test data is used to ensure that the solution is functioning correctly, to what was planned in the design stage. Test data should test all aspects of the solution.
- Give some examples of electronic validation that can be established using database software
Range checks, spell/grammar checks,, data type checks, input masks, alignment